

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016762**Date Inspected:** 04-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 11

This QA Inspector randomly observed the following work in progress in Bay 11:

SMAW welding of weld joint WSD1-TL5-4B/F-4 located on PCMK west tower, lift 5, internal connection plates. Alternating welders were identified as 066401, 066398. QC was identified as ZPMC CWI Xu Le Feng (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhao Mao Mao (QCA1), who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U4c.

SMAW welding of weld joint WSD1-TL5-4B/F-1 located on PCMK west tower, lift 5, internal connection plate to skin C. Alternating welders were identified as 067707, 067520. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U4c.

SMAW welding of weld joint ESD1-TL5-2B/F-19 located on PCMK east tower, lift 5, internal connection plates. Alternating welders were identified as 040614, 046704. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U4c.

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SMAW welding of weld joint ESD1-TL5-2B/F-15 located on PCMK east tower, lift 5, internal connection plate to skin C. Alternating welders were identified as 041271, 040667. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U4c.

### Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

FCAW tack and root pass welding of weld joint SEG3007AC-001 located on PCMK OBG segment 13AE. Welder was identified as 051356. QC was identified as ZPMC CWI Li Yan Hua (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhang Lin (QCA2), who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-2231-B-U2-F including the root gap of 0 to 3mm. The weld was being kept at or above the minimum preheat and interpass temperature with electric heaters placed above and below the plates at the weld. Also at this location and appearing to be monitoring the welding operation was ABF Representative Wei Jian Bo.

SAW welding of weld joint SEG3007AC-001 located on PCMK OBG segment 13AE. Welder was identified as 058100. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA2, who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-2221-B-U3c-S-2. The weld was being kept at or above the minimum preheat and interpass temperature with electric heaters placed above and below the plates at the weld. See photo below. Also at this location and appearing to be monitoring the welding operation was ABF Representative Wei Jian Bo.

SMAW welding of weld joint SSD1-TL5-1B-F-16 located on PCMK south tower, lift 5, internal connection plate to skin C. Welder was identified as 050289. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang (QCA3), who was not a CWI. Welding variables recorded by QCA3 appeared to comply with WPS-B-T-3213-TC-U4c.

SMAW welding of weld joint NSD1-TL5-3B-F-4 located on PCMK north tower, lift 5, internal connection plate to skin D. Alternating welders were identified as 066418, 037996. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA3, who was not a CWI. Welding variables recorded by QCA3 appeared to comply with WPS-B-T-3213-TC-U4c.

SMAW welding of weld joint NSD1-TL5-3B-F-9 located on PCMK north tower, lift 5, internal connection plate to skin C. Alternating welders were identified as 066258, 068924. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA3, who was not a CWI. Welding variables recorded by QCA3 appeared to comply with WPS-B-T-3213-TC-U4c.

### Heavy Dock

This QA Inspector randomly observed the following work being performed on the Heavy Dock:

No apparent welding related work was being performed on the Heavy Dock. All 4 towers' lift 3 were connected and positioned vertically on a base pedestal at end of the Heavy Dock. All 4 towers' lift 2 were positioned

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horizontally on the deck of the ship at the end of the Heavy Dock. The ZPMC 4000 ton floating crane was moored outboard of the ship and was rigged to east tower, lift 4 as it was positioned on top of east tower, lift 3. South tower lift 4 was positioned horizontally near the end of the Heavy Dock.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

No significant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Micheal Ng, 159-2184-5703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Goulet, George	Quality Assurance Inspector
<b>Reviewed By:</b>	Dawson, Paul	QA Reviewer

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